REMARKS

This amendment is believed to be fully responsive to the examiner's office action. It is requested that matters as to form that have not been addressed in this response be held in abeyance until allowable subject matter is indicated. Reconsideration, further examination, entry of the above amendments, and allowance is respectfully requested in view of the above amendments which address the points in the Examiner's as follows:

Claim Rejections -35 U.S.C. § 112

The examiner rejected claims 8 and 13 asserting that ``flexible, generally inelastic'' is an oxymoron. However, elasticity refers to the ratio of strain versus stress on a material, while flexibility refers the material's rigidity or ability to flex. Accordingly, it is asserted that a section of material made from a relatively inelastic material such Kevlar® synthetic fiber will be flexible but rather inelastic. The same can be said of other fabrics and materials such as leather. Accordingly, it is submitted that the claim language is not unclear. A discussion from Machinery's Handbook is enclosed, disclosing the well-known meaning of elasticity.

Other Matters

Please note that the applicant's address (but not the undersigned's) has changed to 55 East 4th Avenue, STE 103, Denver, Colorado 80203, and the use of this address as the inventor's address on the issued patent is requested.

CONCLUSION

In view of the above, it is submitted that the applicant has placed this application in condition for allowance. Further examination, abeyance of any remaining informalities, and reconsideration and withdrawal of the rejections and objections raised in the Examiner's Office Action is requested. Moreover, it is submitted that the claims are now in condition for allowance, and that allowance of the present application is in order and is also requested.

Should the Examiner deem that any further amendment is desirable to place this application in condition for allowance, the examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted this 6th day of July, 2004,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 6th day of July, 2004.

Ramon L. Pizarro

A REFERENCE BOOK
FOR THE MECHANICAL ENGINEER, DESIGNER,
MANUFACTURING ENGINEER, DRAFTSMAN,
TOOLMAKER, AND MACHINIST

26th Edition
Machinery's Handbook

BY ERIK OBERG, FRANKLIN D. JONES,
HOLBROOK L. HORTON, AND HENRY H. RYFFELL

CHRISTOPHER J. MCCAULEY, EDITOR
RICCARDO HEALD, ASSOCIATE EDITOR
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Elastic limit is the maximum stress to which a test specimen may be subjected and still return to its original length upon release of the load. A material is said to be stressed within the *elastic region* when the working stress does not exceed the elastic limit, and to be stressed in the *plastic region* when the working stress does exceed the elastic limit. The elastic limit for steel is for all practical purposes the same as its proportional limit.

Yield point is a point on the stress-strain curve at which there is a sudden increase in strain without a corresponding increase in stress. Not all materials have a yield point. Some representative values of the yield point (in ksi) are as follows:

Aluminum, wrought, 2014-T6	60	Titanium, pure	55–70
Aluminum, wrought, 6061-T6	35	Titanium, alloy, 5Al, 2.5Sn	110
Beryllium copper	140	Steel for bridges and buildings, ASTM A7-61T, all shapes	33
Brass, naval	25–50		
Cast iron, malleable	32–45	Steel, castings, high strength, for structural purposes, ASTM A148.60 (seven grades)	40–145
Cast iron, nodular	45–65		
Magnesium, AZ80A-T5	38	Steel, stainless (0.08–0.2C, 17Cr, 7Ni) ¼	78

Yield strength, S_y, is the maximum stress that can be applied without permanent deformation of the test specimen. This is the value of the stress at the elastic limit for materials for which there is an elastic limit. Because of the difficulty in determining the elastic limit, and because many materials do not have an elastic region, yield strength is often determined by the offset method as illustrated by the accompanying figure at (3). Yield strength in such a case is the stress value on the stress-strain curve corresponding to a definite amount of permanent set or strain, usually 0.1 or 0.2 per cent of the original dimension.

Ultimate strength, S_u, (also called *tensile strength*) is the maximum stress value obtained on a stress-strain curve.

Modulus of elasticity, E, (also called *Young's modulus*) is the ratio of unit stress to unit strain within the proportional limit of a material in tension or compression. Some representative values of Young's modulus (in 10^6 psi) are as follows:

Aluminum, cast, pure	9	Magnesium, AZ80A-T5	6.5
Aluminum, wrought, 2014-T6	10.6	Titanium, pure	15.5
Beryllium copper	19	Titanium, alloy, 5 Al, 2.5 Sn	17
Brass, naval	15	Steel for bridges and buildings, ASTM A7-61T, all shapes	29
Bronze, phosphor, ASTM B159	15		
Cast iron, malleable	26	Steel, castings, high strength, for structural purposes, ASTM A148-60 (seven grades)	29
Cast iron, nodular	23.5		

Modulus of elasticity in shear, G, is the ratio of unit stress to unit strain within the proportional limit of a material in shear.

Poisson's ratio, μ, is the ratio of lateral strain to longitudinal strain for a given material subjected to uniform longitudinal stresses within the proportional limit. The term is found in certain equations associated with strength of materials. Values of Poisson's ratio for common materials are as follows:

Aluminum	0.334	Nickel silver	0.322
Beryllium copper	0.285	Phosphor bronze	0.349
Brass	0.340	Rubber	0.500
Cast iron, gray	0.211	Steel, cast	0.265
Copper	0.340	high carbon	0.295
Inconel	0.290	mild	0.303
Lead	0.431	nickel	0.291
Magnesium	0.350	Wrought iron	0.278
Monel metal	0.320	Zinc	0.331

Compressive Properties.—From compression tests, *compressive yield strength,* S_{cy}, and *compressive ultimate strength,* S_{cu}, are determined. Ductile materials under compression